

Applications of soft x-ray lasers for probing high density plasmas

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The reliability and characteristics of collisionally pumped soft x-ray lasers make them ideal for a wide variety of plasma diagnostics. We have used the neon-like yttrium x-ray laser to radiograph thin exploding foils and study the effects of drive uniformity, using xuv interferometry we have characterized high density plasmas relevant to inertial confinement fusion and basic plasma physics. In this talk we'll review the successes of the LLNL program and discuss the current limitations and what improvements can be made to extend this work.

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